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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/883,448	06/19/2001	Hirofumi Honda	Q64974	2803

7590 04/24/2003

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EXAMINER
LIU, MING HUN

ART UNIT	PAPER NUMBER
2697	7

DATE MAILED: 04/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/883,448	HONDA ET AL.	
	Examiner	Art Unit	
	Ming-Hun Liu	2697	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-3 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-3 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 6,094,187 to Jones et al and applicant's admitted prior art on pages 1-2 of the specification. .

In reference to claim 1, the applicant admits in the Description of Related Art section of the application states that a driving method for a plasma display panel for driving gradation-wise plasma display panel having a plurality of discharge cells each arranged in a matrix and bearing a role of a pixel by constituting one field of input image signals by a plurality of sub-fields and setting each of these discharge cells to one of a light emission cell state and a light non-emission cell state in accordance with said input image signal in each of said sub-fields is well known in the art (page 1, paragraph 3 and page 2, paragraph 1).

Jones discloses that it is well known in the art of driving liquid crystal display matrix displays using both temporal and spatial dithering, causing only discharge cell under light emission cell state to emit light a number of light emissions allotted in accordance with weighting of the sub-field, wherein the number of light emissions to be allotted in accordance with weighting of the sub-field is rendered different for each of the discharge cells inside a discharge cell block consisting of a plurality of discharge cells adjacent to one another (column 8, lines 7-17 and Figure 5a). Even though Jones invention deals with liquid crystal displays,

Jones' invention could have been easily modified for similar matrix type displays such as plasma displays. It would have been obvious to one skilled in the art to recognize the similarities between driving plasma and liquid crystal matrix displays and thus choose to implement Jones' temporal and spatial dithering driving method to allow for further gradation in plasma displays.

In reference to claim 2, Jones describes a driving method of a liquid crystal display panel, wherein the number of light emissions to be allotted to each of the discharge cells inside the discharge cell block is varied for each field (column 8, lines 5-17). As mentioned above in the rejection of claim 1, Jones' invention could have been easily modified to accommodate the driving of plasma displays.

Referring to claim 3, as mentioned above in the rejection of claim 1, a driving method of a plasma display panel for driving gradation-wise a plasma display panel having a plurality of discharge cells each arranged in matrix and bearing a role of a pixel by constituting one field of input image signals by a plurality of sub-fields, comprising the following steps serially conducted in each of the sub-fields, wherein a pixel data write step for setting each of the discharge cells to one of a light emission cell state and a light non-emission cell state in accordance with the input image signal is well known in the art.

The driving method of sustaining and erasing is a process that is well known in the art and inherent to the functionality of plasma displays. Jones however, failed to describe in detail the particular order of selecting and erasing of discharge cells in a cell block as explained by the applicant. There is no disclosed criticality in the specifications of the application stating why

the order of selecting and erasing the discharge cells must be in the claimed order. The order is a design specification that can be modified by one skilled in the art.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ming-Hun Liu whose telephone number is 703-305-8488. The examiner can normally be reached on Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Mancuso can be reached on 703-305-3885. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4750.

Ming-Hun Liu
April 21, 2003